

REMARKS

Claims 1-12 remain, claims 13-20 drawn to a nonelected invention cancelled by the present amendment.

The claims have been amended to hopefully obviate the objections applied by the Examiner.

Claim 5 has been rewritten in independent form so as to be placed in condition for allowance, together with claim 6 dependent thereon.

Claim 1 has been amended to positively recite the pin and rod of an automotive linkage system in combination with a connection arrangement. It is felt that by this amendment the rejection of claim 1 under 35 U.S.C. 102(b) as anticipated by Liaw, U.S. 5,219,242 will be obviated, as Liaw describes only a plug connector for use in a computer system.

In addition, the pins 5 are slidably movable with respect to the housing pieces and extend parallel to the "rods" A.

It is felt that the "rods A" cannot fairly be said that a driving connection to the pins 5 is produced by the housing pieces.

Thus, it is urged that Claim 1 and claims 2-4 and 7-9 dependent thereon are not anticipated by Liaw under 35 USC §102(a).

Claim 1 has also been amended to more clearly patentably distinguish over Terada et al (U.S. 5,613,792) in view of Oellers (U.S. 6,257,563) to avoid the rejection under 35 USC 103(a).

Firstly, it is respectfully submitted that the Oellers patent would not suggest to one skilled in the art to add an isolator on the control rod of Terada et al. Oellers

concerns steering tie rods rather than a control rod in a transmission linkage. The primary purpose of the elastic elements 30 in Oellers is to reduce shock loading to reduce wear.

There is no shock loading in the ball joint of Terada et al which is used in control linkages.

Applicant does not dispute that isolators are known to be used in such joints. However, such isolators have traditionally been installed around the pin cavity such as shown in U.S. 4,581,953 and EP 0800010A1, since a substantial thickness of isolator material has been thought to be desirable.

Such joints as used in automotive applications have strict requirements in regards to the level of force required to insert the pin during assembly while requiring achieving a much higher separation force to prevent inadvertent pull out of the pin. These diverse force levels are difficult to achieve with a pin cavity having a surrounding isolator since there is a tendency for the assembly and separation forces to be of a similar level. This difficulty creates design challenges when designing for the great number of pin configurations.

A thick isolator also has a tendency to introduce lash due to its compressibility, which is a significant draw back in the context of an automotive control linkage, particularly for transmissions.

The claimed invention solves these difficulties by using an isolator on the control rod end which is compressed between two housing pieces when being assembled together. The resulting interference fit reduces lash while still providing adequate vibration isolation.

Terada et al has the control rod inserted into a hole in one end of the housing. An abutment face if positioned against an end wall properly locates the groove 3. An

added isolator would reduce the effectiveness of this abutment to locate the control rod in the hole 23.

One skilled in the art would deem it desirable to add a thick walled isolator interposed over the rod end and inserted the housing hole 23 due to the lash that would develop.

Secondly, and more importantly, even if an isolator were added to Terada et al, the structure of claim 1 would not be met since claim 1 specifies that the isolator is compressed between two housing pieces when the two pieces are assembled and fixed together to create an interference fit. In Terada et al, the two tines on a forked end 45 (Figure 9) grips a groove 3 in the rod 1.

An isolator on the rod would thus be compressed between portions of one housing piece alone.

Accordingly, claim 1 and claims 2-4 and 7-12 dependent thereon are urged to define patentable subject matter over the references.

New claim 21 defines the thickness of the isolator on the rod as being about 1 millimeter (.039 inches), this degree of thickness of the isolator is not taught in the prior art and when compressed reduces lash to a minimal level while still providing vibration isolation.

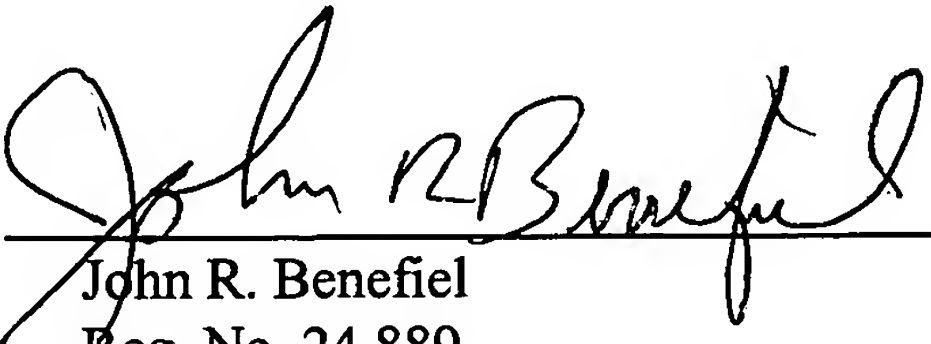
Such an approach is novel and not suggested in the prior art.

Accordingly, favorable reconsideration is respectfully requested.

Respectfully submitted,

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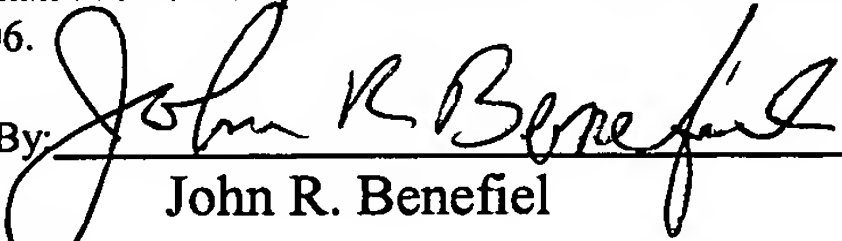

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